

AMENDMENTS TO THE CLAIMS

Claims 1-8 (canceled)

9. (previously presented) An optical pickup device comprising:

a light source configured to emit light onto an object;

a plurality of light receiving elements configured to receive divided reflection light from the object;

a signal processing circuit including means for converting current signals output from each of the plurality of light receiving elements into voltage signals, and means for adding the voltage signals to obtain an added voltage signal; and

a complementary signal generating circuit configured to generate a complementary signal of the added voltage signal by performing a level shift operation on a signal having a waveform symmetrical to that of the added voltage signal about a reference voltage.

Claim 10 (canceled)

11. (previously presented) An optical pickup device comprising:

a light source configured to emit light onto an object;

a plurality of light receiving elements configured to receive divided reflection light from the object;

a signal processing circuit including a part configured to convert current signals output from each of the plurality of light receiving elements into voltage

signals, and a part configured to add the voltage signals to obtain an added voltage signal; and

a complementary signal generating circuit configured to generate a complementary signal of the added voltage signal by performing a level shift operation on a signal having a waveform symmetrical to that of the added voltage signal about a reference voltage.

12. (New) A light receiving unit integrally comprising:

a plurality of light receiving elements; and

a processing circuit,

wherein said processing circuit includes a plurality of current-to-voltage converters configured to convert current signals output from each of the light receiving elements into voltage signals, an adder configured to add the voltage signals to obtain an added voltage signal, and an attenuator configured to attenuate the added voltage signal or, an operation unit that includes the adder and the attenuator, and

wherein the voltage signals output from the current-to-voltage converters and a voltage signal output from the attenuator or the operation unit are output from the light receiving unit.

13. (New) The light receiving unit as claimed in claim 12, wherein:

the processing circuit includes an inversion circuit configured to generate a complementary signal having a waveform symmetrical to that of the voltage signal output from the attenuator or the operation unit about a reference voltage, and

the complementary signal is also output from the light receiving unit.

14. (New) The light receiving unit as claimed in claim 13, wherein:

the processing circuit includes a shift circuit configured to generate a shifted complementary signal by performing a level shift on the complementary signal with a fixed voltage level, and

the shifted complementary signal is output from the light receiving unit in place of the complementary signal.

15. (New) The light receiving unit as claimed in claim 12, further comprising:

an inversion and adder circuit configured to generate a complementary signal having a waveform symmetrical to that of the added voltage signal; and

a shift circuit configured to generate a shifted complementary signal by performing a level shift on the complementary signal with a fixed voltage level,

wherein the shifted complementary signal is also output from the light receiving unit.

16. (New) The light receiving unit as claimed in claim 15, further comprising:

another attenuator configured to generate an attenuated complementary signal by attenuating the shifted complementary signal,

wherein the attenuated complementary signal is output from the light receiving unit in place of the shifted complementary signal.

17. (New) An optical pickup device comprising:

a light source configured to emit light onto an object; and

the light receiving unit as claimed in claim 12,

wherein the light receiving elements receive divided reflection light from the object.

18. (New) An information reproduction/recording apparatus configured to optically record information on and/or optically reproduce information from a recording medium, comprising:

an optical pickup device as claimed in claim 17, wherein the recording medium is the object;

a moving device configured to move the optical pickup device;

a detector unit configured to detect a light spot of the light irradiated on the recording medium;

a control unit configured to control the light spot to follow a read or write position on the recording medium based on a result of the detection by the detector unit; and

a reproduction unit provided independently of the optical pickup device and coupled to the optical pickup device via a transmission path that is configured to transmit and receive voltage signals output from the processing circuit, so as to reproduce the information from the recording medium based on the voltage signals output from the processing circuit.

19. (New) An information processing apparatus comprising:
- an information reproduction/recording apparatus as claimed in claim 18,
- wherein various information processing operations are performed.